

# Chapter 1

## Exploring Accommodation Cluster and Tourism Development Based on GPS Positioning and GIS Analysis

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### ABSTRACT

*This research aims to locate a set of points of B&B accommodations on a coffee cultivation area by using GPS positioning and GIS spatial analysis for responding to Porter's concept of industry cluster and to analyze the locational factors of B&B accommodation. Due to the coffee attractiveness, the B&B lodging establishments have sprung up in the area like mushrooms to service more and more tourists for the past 20 years. The spatial cluster of B&B establishments is displayed by specifying a set of GPS positioning points on different GIS raster surfaces to process point density analysis, buffer analysis and terrain analysis. To explore the locational characteristic of B&B establishments, overlay analysis is processed to examine the terrain, landscape, accessibility and tourist attractiveness factors. Instead of focusing on innovation atmosphere, knowledge intensive and technology transfer of new industry cluster factors, this research emphasizes traditional cluster concept of geography proximity on the benefits of agriculture and tourism linkage to available of tourist foods.*

### INTRODUCTION

The concept of an industry cluster, originally applied in the manufacture industry to demonstrate competitive advantages, has gained increasing focus on tourism for promoting regional economic (Telfer, 2001; Michael, 2002; Michael, 2003; Jackson & Murphy, 2006; Bernini, 2009; Hsueh, 2017). Jackson &

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Murphy (2006) examined the relevance of Porter's (1998) cluster theory to regional tourism development on economic impacts. In order to reflect on the application of cluster theory to tourism development, they proposed tourism cluster is a locational advantage, a significant agent for economic redevelopment. Porter's industry cluster concept means a geography proximity of locational concentration of interconnected firms and associated institutions, which not only compete with but also cooperate to take advantages of a growing reputation and community involvement (Porter, 1998, pp. 197–198; Jackson & Murphy, 2006, p. 1022). Actually, Porter also used a tourism cluster as an example of industry clusters by citing the California wine cluster (Porter, 1998, pp. 183-205). The concept of industry cluster to tourism development has applied by a number of researchers including Go & Williams (1993), Gray (1996), Hall (2004, 2005), Enright & Roberts (2001), Jackson & Murphy (2006), Michael (2002, 2003) and Novelli, Smithz & Spencer (2006). Industry cluster of firm's concentration in a region to share competitive advantages can also be used to describe tourism cluster in which service firms compete, cooperate and market collectively through marketing their sites together on the map (Delgado, Porter & Stern, 2014; Burger, Karreman & Eenennaam, 2015).

The concept of an industry cluster is often used to manufacture cluster on the dimensions of production, marketing and distribution of goods, and may be appropriate for service firms to focus on the same dimensions. Accordingly, this concept also can transfer to the dimensions of information sharing, knowledge spillover and technology innovation for service firm's cluster. Traditional agglomeration economy includes the minimization of transport and transaction costs for co-location factor of suppliers, subcontractors and assemblers, and lower costs by accessing specialized labors in geography proximity. Agglomeration economy is associated with industrial district based on firm's co-location and labor pool. Industrial district is a specialized industry, a given production activity in a given region (Marshall, 1966; Gordon & McCann, 2000; Henderson, 2003). Some researchers have tried to adapt the concept of industrial district to tourism service industry (Hjalager, 2000; Pearce, 1998; Lazzeretti, 2003). While only using industrial district concept of agglomeration economy to deal with the issue of tourism development, it is not enough to explain why a number of service firms involve in the same region to promote tourism. The concept of industry cluster (Porter, 1990; Porter, 1998), a geographical concentration of interconnected firms, specialized suppliers and service providers, is more appropriate than industrial district concept to clarify the spatial cluster of service firms. The concept of industrial district generally refers to a homogeneous production activity, but when dealing with tourism cluster, the concept of industry cluster is more suitable to explain its cluster benefits in which the cluster participants serve in different service sectors (Bernini, 2009, p. 879).

Bernini (2009) assessed Italian convention industry and its relationship with the tourism development by using cluster theory, indicated the development of the different phases of the life cycle of destinations in Italy to trace the influencing locational factors and the strategies to enhance the competitiveness of Italian convention industry in the global market. He proposed not only all destinations possessing the appropriate factors to attract tourists of the extent to which successful factors for tourism cluster but also distinguishing the combination of tourism services and products supplied to promote existing clusters. The locational factors play obvious importance for tourism development, for example, top rank hotels are constructed in gateway cities for an international business due to the number of tourists, especially the increase in the number of short domestic trips (Johnson & Vanetti, 2005). Strong tourism growth can benefit the tourism-related firms such as an accommodation sector. Accommodation sector in the high tourism potential areas will perform better than other tourism-saturated areas, so the role of tourist

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